

Incremental Encoders

Miniature, magnetic	2430 / 2440 (Shaft / Hollow shaft)	RS422
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Thanks to their non-contact magnetic scanning technology the miniature-format encoders 2430 and 2440 guarantee exceptional ruggedness – and this with a resolution of up to 256 pulses per revolution.

As a result of their compact outer diameter, they are ideal for use where installation space is restricted.



High rotational speed	Temperature -20° + 85°	Shock / vibration resistant	Short-circuit proof	Reverse polarity protection	Magnetic sensor technology

Magnetically robust

- The non-contact magnetic technology prevents wear and guarantees a long service life.
- Multiple clamping affords high strain relief to the cable outlet, ensuring longer life.
- Wide temperature range from -20°C up to +85°C
- Flexible connection possibilities: can be supplied with radial or axial cable outlet

Compact Power

- Resolution up to 256 PPR
- Shaft and hollow shaft version

Incremental Encoders

Order code Shaft version	8.2430 Type	. X X 6 X . XXXX a b c d e	If for each parameter of an encoder the <u>underlined preferred option</u> is selected, then the delivery time will be 10 working days for a maximum of 10 pieces. Qts. up to 50 pcs. of these types generally have a delivery time of 15 working days.	
a Flange <u>1 = ø 24 mm</u> 2 = ø 30 mm 3 = ø 28 mm	b Shaft (ø x L) 1 = ø 4 x 10 mm <u>2 = ø 6 x 10 mm</u> 3 = ø 5 x 10 mm, with flat	c Output circuit / Power supply <u>6 = RS422 (with inverted signal) / 5 V DC</u>	e Pulse rate 1 ... 128 (factory programmable) <u>256</u> (e.g. 128 pulses => 0128) Other pulse rates on request	
		d Type of connection 1 = axial cable (2 m PVC cable ø 4.5 mm) <u>2 = radial cable (2 m PVC cable ø 4.5 mm)</u>		

Order code Hollow shaft	8.2440 Type	. 1 X 6 X . XXXX a b c d e	If for each parameter of an encoder the <u>underlined preferred option</u> is selected, then the delivery time will be 10 working days for a maximum of 10 pieces. Qts. up to 50 pcs. of these types generally have a delivery time of 15 working days.	
a Flange <u>1 = ø 24 mm</u>	b Blind hollow shaft (insertion depth max. 14 mm) 1 = ø 4 mm <u>2 = ø 6 mm</u>	c Output circuit / Power supply <u>6 = RS422 (with inverted signal) / 5 V DC</u>	e Pulse rate 1 ... 128 (factory programmable) <u>256</u> (e.g. 128 pulses => 0128) Other pulse rates on request	
		d Type of connection 1 = axial cable (2 m PVC cable ø 4.5 mm) <u>2 = radial cable (2 m PVC cable ø 4.5 mm)</u>		

Mounting accessory for shaft encoders		
Coupling	Bellows coupling ø 15 mm for shaft 4 mm	8.0000.1201.0404

Further accessories can be found in the Accessories section or in the Accessories area of our website at: www.kuebler.com/accessories.
Additional connectors can be found in the Connection Technology section or in the Connection Technology area of our website at: www.kuebler.com/connection_technology.

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Mechanical characteristics		
Speed		max. 12.000 min ⁻¹
Rotor moment of inertia		approx. 0.1 x 10 ⁻⁶ kgm ²
Starting torque		< 0.01 Nm
Shaft load capacity	radial	10 N
	axial	20 N
Weight		approx. 0.06 kg
Protection acc. to EN 60529	housing side	IP65 (IP67K on request)
	flange side	IP50 (IP67K on request)
Working temperature range		-20° C ... +85° C
Materials	shaft / hollow shaft	stainless steel
	clamping flange	MS58
Shock resistance acc. to EN 60068-2-27		1000 m/s ² , 6 ms
Vibration resistance acc. to EN 60068-2-6		100 m/s ² , 55 ... 2000 Hz

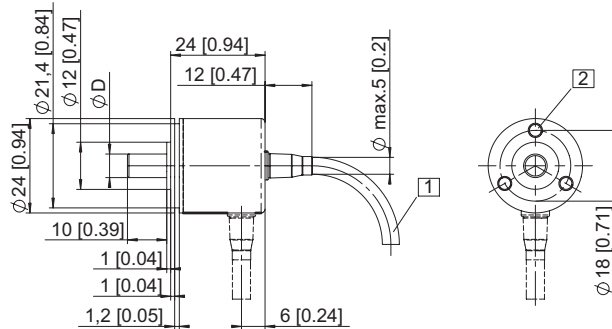
Electrical characteristics		
Output circuit		RS422 (TTL-compatible)
Supply voltage		5 V ±5%
Power consumption with inverted signal (no load)		typ. 40 mA / max. 90 mA
Permissible load/channel		max. ±20 mA
Pulse frequency		max. 300 kHz
Signal level	high	min. 2.5 V
	low	max. 0.5 V
Rising edge time t _r		max. 200 ns
Falling edge time t _f		max. 200 ns
Min. flange distance		0.5 μs ¹⁾
Short circuit proof outputs ²⁾		yes ³⁾
Reverse connection of the supply voltage		no
CE compliant acc. to		EN 61000-6-2, EN 55011 Class B
RoHS compliant acc. to		EU guideline 2002/95/EG

Terminal assignment

Signal:	0 V	+U _B	\bar{A}	A	\bar{B}	B	$\bar{0}$	0
Cable colour:	WH	BN	GN	YE	GY	PK	BU	RD

Dimensions shaft version

Flange type 1 (ø 24 mm)

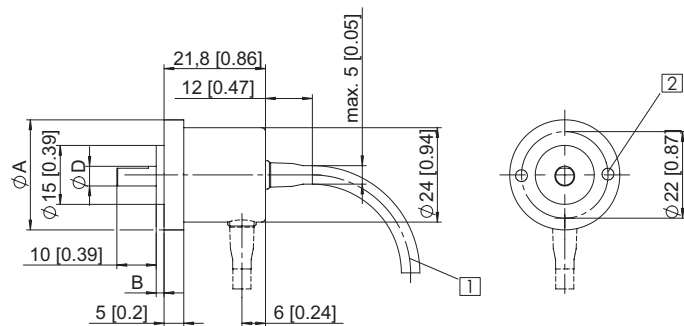


- 1 min. R50 [1.97]
- 2 3 x M3, 4 [0.16] deep

Flange type 2 (ø 30 mm)

Flange type 3 (ø 28 mm)

Flange type	2	3
A	ø 30 mm	ø 28 mm
B	3 mm	2 mm

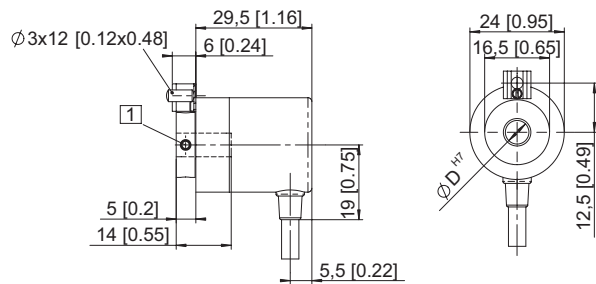


- 1 min. R50 [1.97]
- 2 3 x M3, 4 [0.16] deep

Mounting advice

The flanges and shafts of the encoder and drive should not both be rigidly coupled together at the same time! We recommend the use of suitable couplings (see Accessories section).

Dimensions hollow shaft version



- 1 4 x M3 DIN 915 - SW15

Mounting advice

The flanges and shafts of the encoder and drive should not both be rigidly coupled together at the same time! Cylindrical pin (ISO 2338-A-3m6 x 10) for torque stop incl. in scope of delivery.

- 1) For max. speed use a counter with input frequency of min. 500 kHz.
- 2) If supply voltage correctly applied.
- 3) Only one channel allowed to be shorted-out:
If U_B = 5 V short circuit to channel, 0 V, or +U_B is permitted.
If U_B = 5 ... 30 V short circuit to channel or 0 V is permitted.